From: Stuble, Bill
To: lynn.brickett@netl.doe.gov; vzamansky@eercorp.com
Cc: Skogley, Bob; "Solvay - Dolly Potter"
Subject: Coal Fired Trona Calciner -- Need Nox Control
Date: Thursday, November 20, 2003 12:39:18 PM

Dear Mssrs. Brickett and Zamanasky:

We are planning to convert two trona calciners from gas-firing to coal stoker furnaces. The Nox control will include flue gas recirculation and water injection. SNCR from Fuel Tech is also under study.

However, I was interested in your paper on Advanced Reburning, where sodium carbonate is used to react with Nox.

http://www.netl.doe.gov/coalpower/environment/nox/control-tech/2ndgen.html

Sodium carbonate is the product of trona calcination. We feed the trona ore (90% sodium sesquicarbonate) cocurrently with the furnace offgas (approximately 1800F), into a rotating kiln. The furnace offgas is rapidly quenched and leaves the calciner together with the sodium carbonate, CO2 and moisture from the calcination reaction, and various shale and silica impurities at 290F - 340F.

Most of the SO2 from the coal combustion reacts with the sodium carbonate and is captured in the calciner spill as Na2SO4.

My questions for you are,

1. Is there a simple process to force the reaction of sodium carbonate with Nox?
2. Can it be done in conjunction with our calcination process?
3. How far along is the development of AR?
4. Are there any commercial applications existing?

In the meantime, I am reading your paper.

Thanks!

William E. (Bill) Stuble
Sr. Process Engineer
Solvay Chemicals, Inc.
Interox, Fluorides, Minerals,
P.O. Box 1167
Green River, WY 82935
☎ 307-872-6511
E 307-872-6581
e-✉ Bill.Stuble@Solvay.com
www.solvaychemicals.us